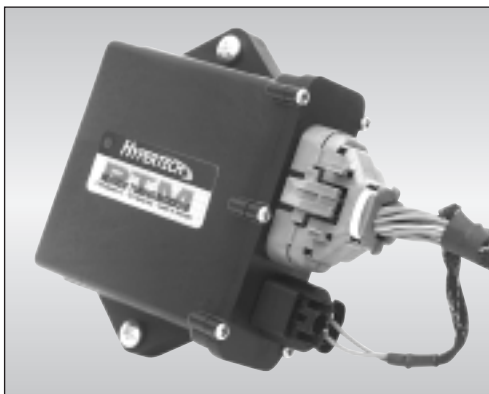




## **IN-LINE POWER TUNING MODULE**



**2003-2004 Ford 6.0L Power Stroke®  
Super Duty F250/F350 & Excursion**

**Part #41042**

## **STEP-BY-STEP INSTALLATION INSTRUCTIONS**

**Kit Contains:**

Hypertech Power Tuning Module  
Wiring harness (connectors are marked for easy installation)  
Hypertech rotary switch assembly  
Hypertech mounting bracket (with module attached)  
Hypertech switch plate (cable, switch with knob, connector/wire)  
Small standard screwdriver  
Installation and operation manual (instructions)  
#10 Phillips-head screws (2 each)  
Retaining plugs (2 each)  
Tie-wraps (3 each)  
One tube of Boss RTV sealer (0.5 oz.)

**You will need the following:**

Insulated adjustable wrench  
(to tighten battery terminals and switch mounting nut)  
Phillips-head screwdriver (for mounting bracket/module)  
Standard (flat) screwdriver (for removing fuse panel)  
10mm socket or nut-driver (for removing fuse block)  
Drill and 1/8", 3/8" and 1/2" drill bits  
(for rotary switch installation)  
Diagonal cutters (for removing tie-wrap excess)

# **PLEASE READ BEFORE INSTALLING THE HYPERTECH IN-LINE POWER TUNING MODULE FOR THE 6.0L POWER STROKE**

## **Special instructions for the 6.0L Power Stroke**

### **2003-2004 Ford Super Duty F250/F350 & Excursion**

**SPECIAL NOTE:** Power Stroke engines built before 9/29/03 must be updated to the newest calibration level (B27.9 or later) by an authorized Ford, Lincoln, or Mercury dealer.

Ford Motor Company's **Technical Service Bulletin No. 03-20-12** states the following...

“Some vehicles may exhibit various driveability conditions listed below:

- Rough/rolling idle when the engine is warm.
- Rough/rolling idle and white smoke after hot restart.
- Lacks power after initial start-up.
- Cold idle kicker performance at warm ambient temps.
- U0306 codes after reprogramming.
- P2263 code set during extended idle.
- False P0196 codes.”

According to this Technical Service Bulletin (Article No. 03-20-12), a PTM/TCM/FICM module calibration level update is available for vehicles equipped with the 6.0L Power Stroke engine built before 9/29/03 that exhibit one (1) of the above conditions.

Since this problem can occur on completely stock engines, modifying these particular vehicles to make even more power could worsen the problem. **For this reason, Hypertech WILL NOT WARRANTY any damage claims to the vehicle or product if their in-line Power Tuning Module is installed on any vehicle equipped with the 6.0L Power Stroke engine that has not been updated to the newest calibration level (B27.9 or later) by an authorized Ford, Lincoln, or Mercury dealership.**

In addition, Ford Motor Company's **Technical Service Bulletin No. 04-09-03** states the following:

“Some vehicles equipped with the 6.0L diesel engine may exhibit engine oil diluted with fuel (OIL LEVEL MAY APPEAR OVER FULL), runs rough, and/or a lower power condition.”

**For this reason, Hypertech WILL NOT WARRANTY any damage claims to the vehicle or product if their in-line Power Tuning Module is installed on any vehicle equipped with the 6.0L Power Stroke engine that exhibits any of these conditions.**

# INSTALLATION INSTRUCTIONS

## I. Disconnect the batteries

For specific instructions and precautionary steps regarding recommendations for battery disconnection, refer to the “Workshop Manual” for 2004 F250/350/450/550 vehicles, published by Ford Motor Company. This manual also contains battery-related precautionary steps regarding the Supplementary Restraint System (SRS) or air bag system. Failure to read and observe factory-recommended instructions may result in personal injury or property damage. **NOTE: When the battery is disconnected and re-connected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. The vehicle may need to be driven to re-learn its adaptive strategy.**

1. Disconnect the secondary battery ground cable (passenger side of the engine compartment).
2. Disconnect the primary battery ground cable on the driver’s side of the engine compartment. **Note: You will also need to remove the retaining clip holding this cable to the battery cover.**
3. Disconnect the primary battery positive cable (driver’s side of the engine compartment).
4. Disconnect the secondary battery positive cable (passenger side of the engine compartment).
5. Remove the battery cover from the primary battery (driver’s side of the engine compartment) and set it aside. See Figure A. When removing this cover, take care to ensure that the cables around the cover are not damaged.

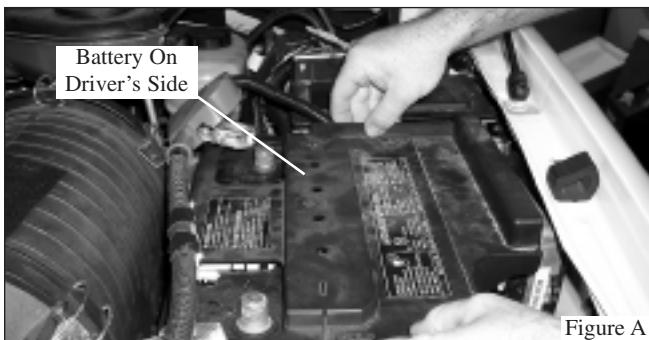
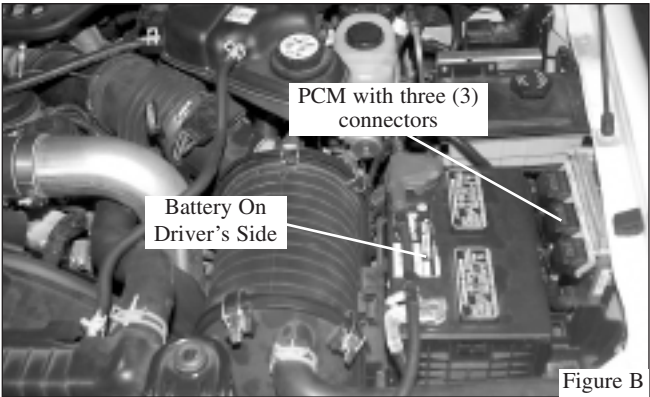


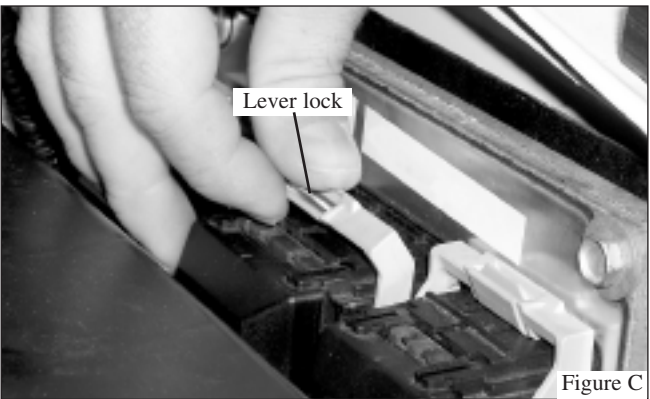
Figure A

## II. Locate the Powertrain Control Module (PCM)

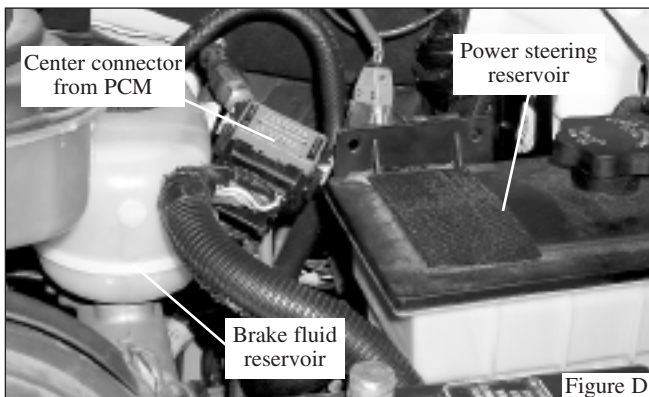
6. See Figure B. Locate the powertrain control module (PCM).  
It is located on the right side of the engine compartment beside the primary battery. The PCM has three (3) connectors visible at the front, facing the battery.



7. See Figure C. Remove the center connector by pinching the lever lock (small tab or tongue in the middle of the connector, as shown) and pushing the lever away from the PCM. The connector will slide out as you push the lever.

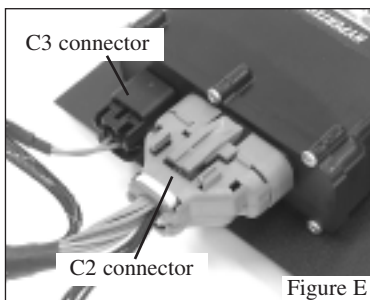


8. See Figure D. The cable for the center connector lies in the space between the battery and the power steering fluid reservoir. Pull the connector and cable out from this space and re-route it so that the connector is between the power steering reservoir and the brake fluid reservoir.

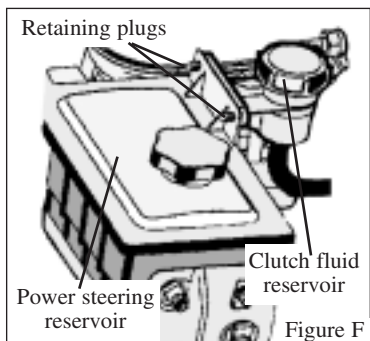


### III. Inspecting the Hypertech cable

9. The Hypertech mounting bracket is provided with the in-line Power Tuning Module and two (2) mounting clips already installed. **NOTE: If these cables are NOT already connected as shown in Figure E, identify them and connect them now.**

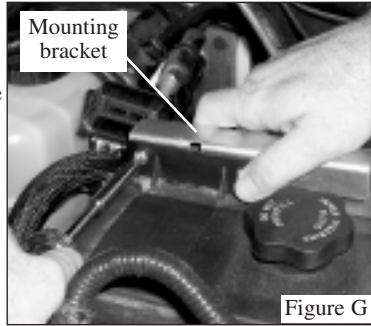


10. **Manual Transmission applications ONLY.** See Figure F. Remove the retaining plugs holding the clutch fluid reservoir to the bracket on the power steering fluid reservoir and lay the reservoir out of the way, prior to beginning this step.

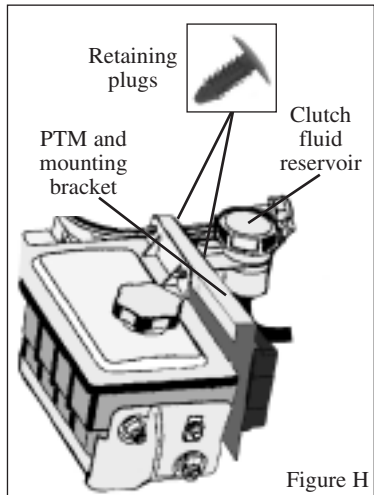


#### IV. Position the Hypertech mounting bracket & PTM

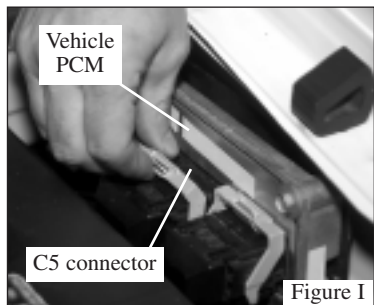
11. See Figure G. Keeping the Hypertech cable out of the way, position the mounting bracket on the rear side of the power steering fluid reservoir. There is a bracket with two (2) holes on this side of the power steering fluid reservoir. Align the mounting clips with these holes and secure the Hypertech bracket using the phillips-head screws provided.



12. See Figure H. If you previously removed the clutch fluid reservoir (**Manual transmission applications**), re-mount the reservoir to the holes located above the Hypertech in-line Power Tuning Module on the Hypertech mounting bracket. Two (2) retaining plugs have been provided, in case the originals were damaged when you removed them. Push the retaining plugs in all the way to secure the clutch fluid reservoir to the Hypertech mounting bracket.



13. See Figure I. The large connector on the Hypertech cable, marked C5, will plug into the PCM where the factory cable was removed in Step 7 on page 5 (Figure C). **There must be enough room beside the cable to re-install the primary battery cover.**



14. See Figure J. Route the remaining large connector (marked C4) on the Hypertech cable between the power steering fluid reservoir and the brake fluid reservoir. Position the two (2) large connectors (one is the connector removed from the middle of the PCM) to mate to each other. Mate the connectors and lock the lever.

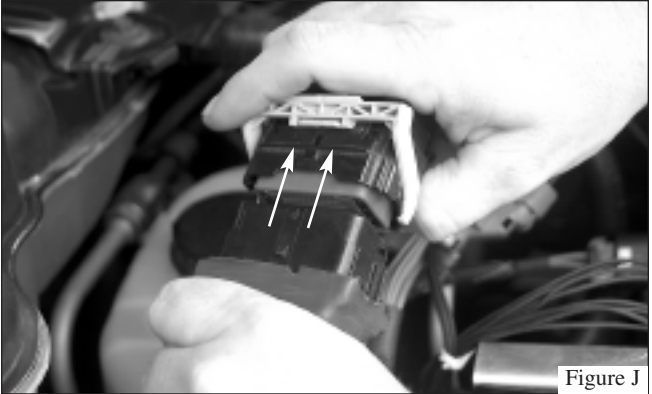


Figure J

## V. Reconnect the batteries

**NOTE:** When the battery is disconnected and re-connected, some abnormal conditions may occur while the vehicle re-learns its adaptive strategy. This typically requires the vehicle be driven about 10 miles (or fifteen minutes) in the “stock tuning” (setting) mode of operation. This should be done after installation is complete.

15. See Figure K. There is one (1) section of the Hypertech cable remaining. It has a small, 4-pin connector (C6). Set this out of the way of the primary battery and proceed with re-attaching the battery cover and cables.

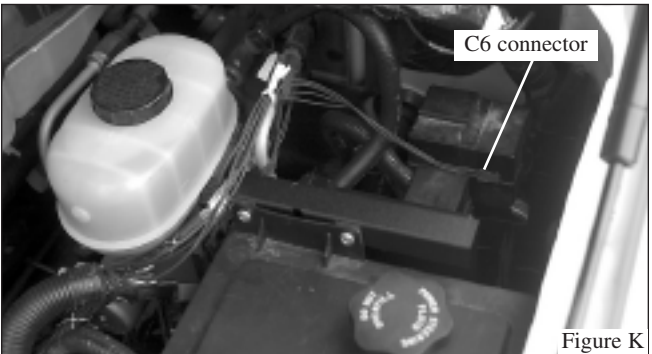


Figure K



16. Re-install the battery cover onto the primary battery (driver's side of the engine compartment). Make sure the cables around the cover are positioned such that the cover can be properly seated when installed. Connect the secondary battery positive cable (passenger side of the engine compartment). Connect the primary battery positive cable (driver's side of the engine compartment). Connect the primary battery ground cable (driver's side of the engine compartment). Connect the secondary battery ground cable (passenger side of the engine compartment).

## INSTALLING ROTARY POWER SELECTOR

Below are two (2) possible ways to install the Hypertech Rotary Power Selector for the Power Tuning Module. The first method requires no drilling. The second requires some drilling and mounts the Rotary Power Selector in the dash below the headlight controls. **The Rotary Power Selector can be mounted in any location in the vehicle, as these are only suggestions of possible mounting locations.**

### Option 1 (No drilling required)

1. See Figures L & M. Route the Rotary Power Selector switch cable from the Hypertech Power Tuning Module along the driver's side inner fender panel, past the hood hinge, and toward the windshield molding (as shown in Figure L). Then route the cable beneath the driver's side door molding and into the cab at the left edge of the dashboard (as shown in Figure M). Once this cable routing is completed, attach the Rotary Power Selector switch to the cable. The switch can now be mounted in a convenient location or the cable and switch coiled for storage behind the driver's side dashboard for easy access when a tuning level change is desired. **(NOTE: This method is provided for installations where it is undesirable to drill a mounting hole in the dashboard. For a more permanent installation of the Rotary Power Selector switch, option 2 is provided.)**

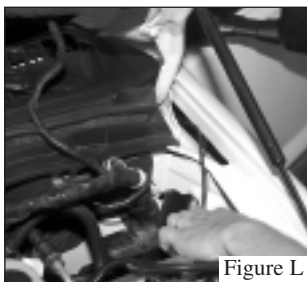


Figure L

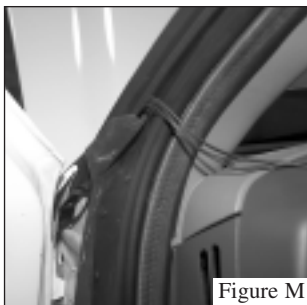
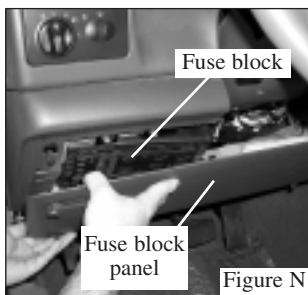


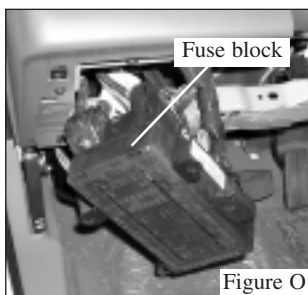
Figure M

## Option 2 (Drilling required)

1. See Figure N. Locate the fuse block panel. The panel is marked “Fuse Panel” in the upper left corner. Using a flathead screwdriver, loosen the four (4) retaining clips by turning them a half turn. Then remove the panel and set aside.

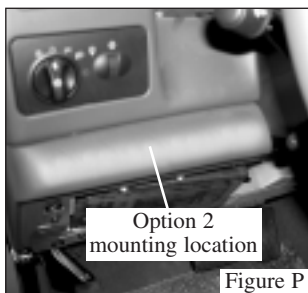


2. See Figure O. There are four (4) bolts that hold the fuse block in place. Use a 10mm socket or nut-driver to remove these bolts and pull out the fuse block. Swing the block out and to the left to access the lower edge of the dash.



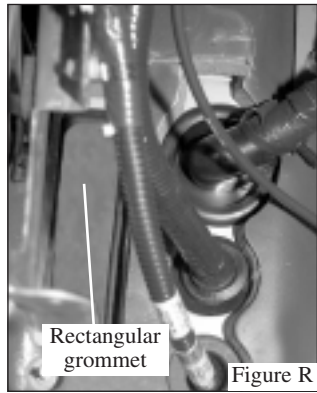
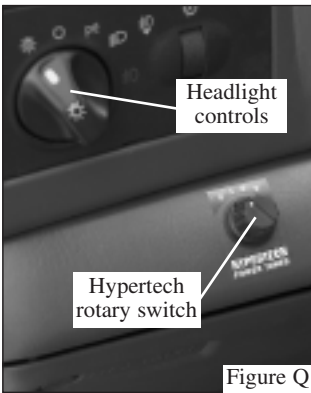
3. The suggested location area for the switch installation is shown in Figure P.

4. Using the template provided on page 14 of these instructions, locate and drill a 3/8” hole in the desired location for the switch and a 1/8” hole below and to the right of the main hole. This 1/8” hole is used to lock the switch in place.



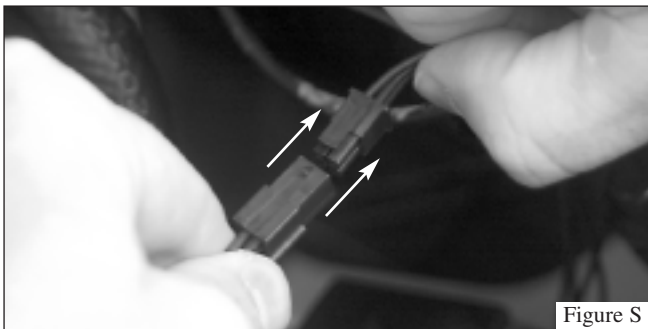
**Note: Make sure that there are no obstructions behind the chosen location, prior to drilling. In addition, use the Hypertech switch assembly to check that the location of the hole will allow enough room for the switch.**

5. See Figure Q. On the Hypertech Rotary Power Selector switch, remove the mounting nut and washer from the switch shaft. There is one (1) additional ring on the switch shaft. The tab on this ring needs to remain in position number 4 when the switch is installed. From behind the panel, insert the switch into the panel hole. Line up the positioning tab into the small drilled hole. On the outside of the dash, place the provided Hypertech switch plate over the shaft. Make sure that the plate is lined up so that the numbers 1 and 2 are spaced equally on either side of the 12 o'clock position. Secure the switch in place with the washer and mounting nut. Using the small screwdriver provided, install the knob onto the switch shaft. The screw should set against the flat portion of the knob shaft. Rotate the knob left (counter-clockwise) until you reach the stop. The white indicator on the knob should now point to the number 0 on the switch plate.
6. Temporarily re-install the fuse block (Step 2) so that it is out of the way during the next step.



7. See Figure R. From inside the vehicle, look below the dash at the firewall, behind the parking brake, and locate the large rectangular grommet. Using a 1/2" drill bit, carefully drill a hole through the grommet into the engine compartment. **(Note: Prior to drilling, make sure that no obstructions exist on the engine side of the grommet.)**
8. Remove the fuse block and pull to the side, as performed in Step 2 of the power selector installation.
9. Beneath the dash, route the switch cable along existing cable paths toward the 1/2" hole. Feed the connector through the 1/2" hole.

10. See Figure S. From the engine side, pull the connector and cable through the firewall. Attach the connector to the main Hypertech cable by mating the two (2) 4-pin connectors.  
**NOTE: The latch on the switch cable connector should snap over the tab on the mating connector.**



11. Use the tie-wraps provided to secure the cable to existing cables, both inside beneath the dash and inside the engine compartment. **Note: Beneath the dash, make sure that the switch cable is out of the way and clear of the parking brake assembly and driver's leg and foot area. In the engine compartment, make sure that the switch cable is routed away from sources of heat.**
12. Beneath the dash, use the provided small tube of silicone to seal the grommet hole around the cable if desired. The silicone will be dry to the touch in about 1 hour, and fully cured in about 24 hours.
13. Re-install the fuse block and fuse block panel.
14. Check entire installation to make sure that all cables are secure. Use additional tie-wraps to secure as necessary.

# USER INSTRUCTIONS

**NOTE: Due to the adaptive learning strategy, the vehicle will need to be driven about 10 miles (or 15 minutes) on the 0 position (stock tuning) if the Power Tuning Module is ever removed and re-installed.**

Once you have completed all installation instructions, complete the following steps setting or changing power levels.

1. Set the rotary power selector switch to 0 (stock tuning).
2. Start the engine. Keep the transmission in PARK.
3. Bring the engine up to a normal operating temperature level.

**NOTE: The engine MUST be at operating temperature for tuning to be accepted (Typically five (5) minutes of normal engine operation is sufficient to initiate tuning).**

4. Select the tuning level by turning the rotary power selector switch from position 0 to position 1, 2, or 3.
  - a. Setting 0 is the stock engine tuning.
  - b. Setting 1 is Stage 1 engine tuning (+56 HP).
  - c. Setting 2 is Stage 2 engine tuning (+82 HP).
  - d. Setting 3 is Stage 3 engine tuning (+125 HP).

## Changing Power Levels

1. You can change power levels while driving by performing the following steps:
  - a. Back off the throttle (to reduce strain on the powertrain).
  - b. Select tuning level 1, 2, 3, or 0 (back-to-stock).
  - c. Resume normal driving operations.

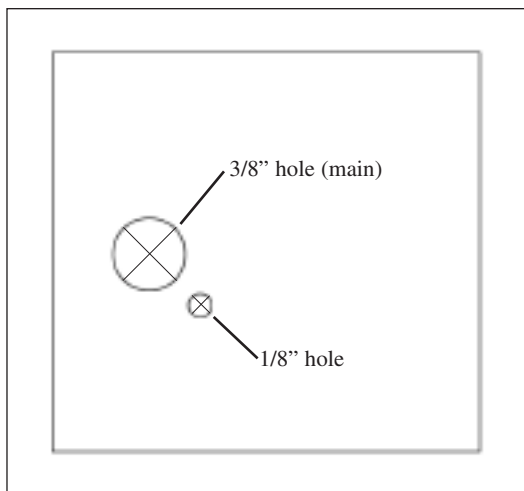
## What To Do Before Taking Your Vehicle In For Service

If you take your vehicle to a dealer or mechanic for service, you must first restore the vehicle's stock tuning. Hypertech recommends you temporarily remove the Power Tuning Module, even if the vehicle is restored to stock tuning. This assures the Hypertech Power Tuning Module will not interfere with any diagnostic procedures that may be performed during vehicle servicing. The Hypertech Power Tuning Module for the 2003-2004 6.0L Ford Power Stroke can be restored to stock tuning by either of two methods: (1) placing the Tuning Level Selector switch in the "0" position or (2) removing the Power Tuning Module. Once this service has been completed, you may re-install the system by repeating the initial installation steps. If you have any questions related to service issues, please call Hypertech technical services at 901-385-1888.

## PRODUCT WARRANTY

Warranty only applies to the original purchaser of a Hypertech product. (Note: Warranty for the Hypertech Power Tuning Module for 6.0L Ford Power Stroke will not apply, if used on engines built prior to 9/29/03 and not updated to the B27.9 calibration.)

Template for switch installation  
as described on Page 14



# SPECIALTY AUTO PARTS CONSUMER'S BILL OF RIGHTS

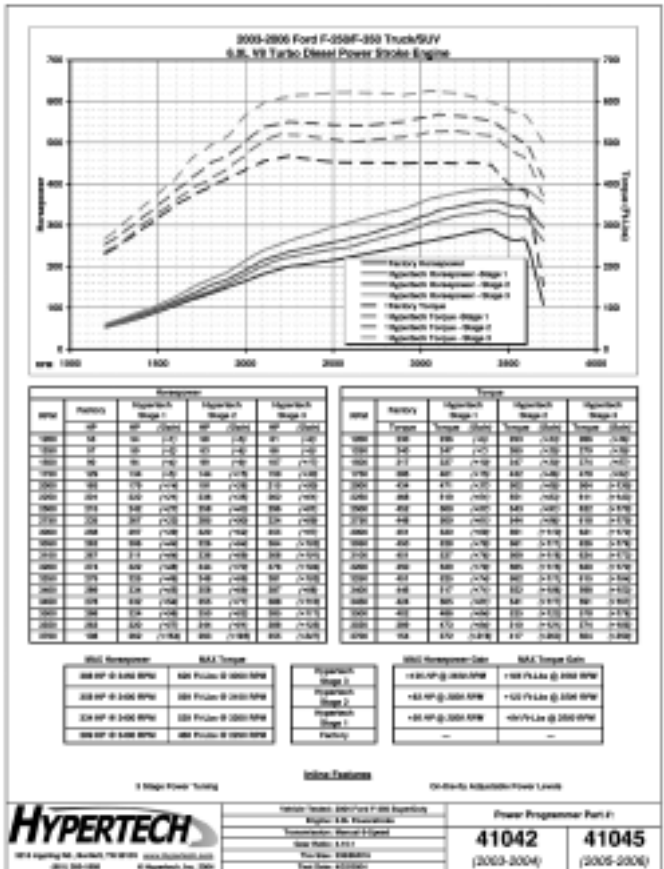
## Your Rights To Personalize Your Vehicle

- Article 1: You have the **Right** to buy high-quality, reliable aftermarket performance and specialty parts, accessories, and styling options.
- Article 2: You have the **Right** to use high-quality aftermarket parts and know that your new vehicle warranty claims will be honored. In fact, your vehicle dealer may not reject a warranty claim simply because an aftermarket product is present. A warranty denial under such circumstances may be proper only if an aftermarket part caused the failure being claimed.
- Article 3: You have the **Right** to install and use emissions-legal aftermarket performance parts without incurring hassles and onerous procedures during state vehicle emissions inspections.
- Article 4: You have the **Right** to actively oppose any proposed (or existing) laws or regulations that will reduce your freedom to use aftermarket automotive parts and service or will curtail your ability to take part in the automotive hobbies of your choice.
- Article 5: You have the **Right** to patronize independent retail stores and shops for vehicle parts and service. The U.S. aftermarket offers the world's finest selection of performance and specialty parts, accessories, and styling options. These aftermarket products satisfy the most discriminating customers seeking personalized vehicles for today's lifestyle.

The Consumer's Bill Of Rights courtesy of  
Specialty Equipment Market Association (SEMA)

# Typical Performance Gains

**NOTE:** All dynamometer tests are performed under controlled conditions. Results may vary, depending on the specific vehicle, altitude, temperature, fuel used, and various other conditions that affect vehicle performance. Power gains shown are specific to the vehicle tested and representative of the average gains verified. **For a color, printable power graph of your particular application, check out our website at [www.hypertech.com](http://www.hypertech.com).**





# Hypertech Merchandise

## T-Shirts

Available in long- or short-sleeve, these T-shirts are high-quality, printed in full-color and display the Hypertech Power Tuning logo. Available in sizes ranging from Small to XXX-large.



## Polo Shirts

These short-sleeve polo shirts available in blue, red, white, or black are high-quality 100% cotton and have a full-color Hypertech logo embroidered on the left chest. Available in sizes ranging from medium to XX-large.



### T-Shirts

Short Sleeve - Small	<b>600</b>
Short Sleeve - Medium	<b>601</b>
Short Sleeve - Large	<b>602</b>
Short Sleeve - X-Large	<b>603</b>
Short Sleeve - XX-Large	<b>604</b>
Short Sleeve - XXX-Large	<b>605</b>
Long Sleeve - Medium	<b>606</b>
Long Sleeve - Large	<b>607</b>
Long Sleeve - X-Large	<b>608</b>
Long Sleeve - XX-Large	<b>609</b>
Long Sleeve - XXX-Large	<b>610</b>

### Part #

### T-Shirts (cont'd)

### Part #

Long Sleeve - Medium	<b>606</b>
Long Sleeve - Large	<b>607</b>
Long Sleeve - X-Large	<b>608</b>
Long Sleeve - XX-Large	<b>609</b>
Long Sleeve - XXX-Large	<b>610</b>

### Polo Shirts (Order part# & color)

Medium	<b>638</b>
Large	<b>639</b>
X-Large	<b>640</b>
XX-Large	<b>641</b>

## Baseball Caps

Hypertech baseball caps are available in three styles and come with a full-color Hypertech logo embroidered on the front. All baseball caps are one-size-fits-all.



	<b>Part #</b>
Solid Navy Blue	<b>633</b>
Denim w/Khaki Bill	<b>634</b>
Khaki w/Navy Blue Bill	<b>635</b>

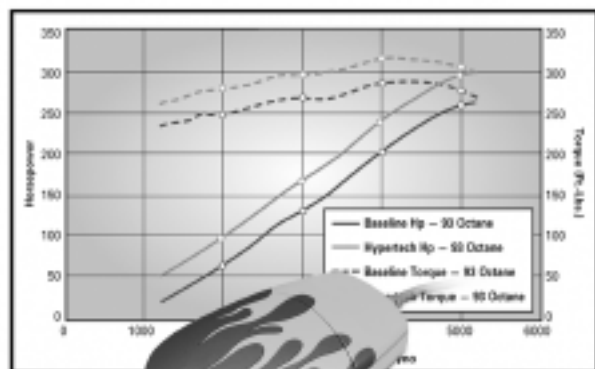
## Coffee Mugs

Enjoy your morning coffee with the Hypertech coffee mug, displaying the Hypertech logo and engine icon in full color on both sides - **Part #626**.



**To Place An Order, Call Hypertech at 901-385-1888.**

## Notes



## Make Tracks To Our Website

If you'd like to see how much horsepower and torque Hypertech Power Tuning™ can deliver for your car or truck, visit our website for the latest dyno charts for the most popular Dodge, Ford, & GM vehicles. If you don't find the dyno chart for your application listed on our website, please send us an email ([sales@hypertech.com](mailto:sales@hypertech.com)) for the horsepower and torque gains of your particular application.

**[www.hypertech.com](http://www.hypertech.com)**

***HYPERTECH***

The World Leader In High-Performance Engine Tuning For Computer-Controlled Vehicles